

Amendments to the Claims:

Claims 55-60 were cancelled. Please amend claims 27 and 54. Please add new claims 63 and 64. A complete listing of the claims is listed below with the proper claim identifiers; this listing of claims will replace all prior versions, and listings, of claims in the application:

1 (Previously presented) A method for identifying a chemoattractant receptor antagonist, comprising:

providing an apparatus comprising an upper chamber and a lower chamber separated by a porous membrane;

placing a candidate antagonist and a cell population comprising first and second chemoattractant receptors in the upper chamber;

placing an inhibitory concentration of a ligand for the first chemoattractant receptor in the lower chamber;

placing an inhibitory concentration of a ligand for the second chemoattractant receptor in the lower chamber;

monitoring movement of the cell population from the upper chamber to the lower chamber, wherein the movement identifies the candidate antagonist as an antagonist of at least one of the first and second chemoattractant receptors; and

determining whether an identified antagonist is an antagonist for one of the first chemoattractant receptors, the second chemoattractant receptor, or both.

2. (Previously presented) The method of claim 1, wherein at least two candidate antagonists are placed with the cell population in the upper chamber.

3. (Original) The method of claim 1, wherein the candidate antagonist is a peptide, peptide-like molecule, non-peptidyl organic compound, inorganic compound, nucleic acid or antibody.

4. (Original) The method of claim 1, wherein the inhibitory concentration of the ligand for the first chemoattractant receptor inhibits cell migration greater than or equal to about 50% of maximal ligand-activated cell migration.

5. (Original) The method of claim 1, wherein the inhibitory concentration of the ligand for the first chemoattractant receptor inhibits cell migration greater than or equal to about 95% of maximal ligand-activated cell migration.

6. (Original) The method of claim 1, wherein the inhibitory concentration of the ligand for the first chemoattractant receptor inhibits cell migration greater than or equal to about 100% of maximal ligand-activated cell migration.

7. (Original) The method of claim 1, wherein the inhibitory concentration of the ligand for the second chemoattractant receptor inhibits cell migration greater than or equal to about 50% of maximal ligand-activated cell migration.

8. (Original) The method of claim 1, wherein the inhibitory concentration of the ligand for the second chemoattractant receptor inhibits cell migration greater than or equal to about 95% of maximal ligand-activated cell migration.

9. (Original) The method of claim 1, wherein the inhibitory concentration of the ligand for the second chemoattractant receptor inhibits cell migration greater than or equal to about 100% of maximal ligand-activated cell migration.

10. (Original) The method of claim 1, wherein the first and second chemoattractant receptors are each independently a chemokine receptor.

11. (Original) The method of claim 10, wherein the chemokine receptor is selected from the group consisting of CCR, CXCR, CX3CR, and XCR classes of chemokine receptors.

12. (Original) The method of claim 11, wherein the chemokine receptors are CXCR1, CXCR2, CXCR3, CXCR4, CXCR5, CCR1, CCR2, CCR3, CCR4, CCR5, CCR6, CCR7, CCR8, CCR9, CCR10, CCR11, CX3CR1 or XCR1.

13. (Original) The method of claim 1, wherein the ligand for the first chemoattractant receptor is a chemokine.

14. (Previously presented) The method of claim 13, wherein the chemokine is selected from the group consisting of CCR, CXCR, and CX3CR receptor ligands.

15. (Original) The method of claim 14, wherein the chemokine is IL-8, GCP-2, Gro α , Gro β , Gro γ , ENA-78, PBP, MIG, IP-10, I-TAC, SDF-1 α , BLC, MIP-1 α , MIP-1 β , RANTES, HCC-1, HCC-2, HCC-3, HCC-4, MCP-1, MCP-2, MCP-3, MCP-4, eotaxin-1, eotaxin-2, TARC, MDC, MIP-3 α , MIP-3 β , 6CKine, I-309, TECK, lymphotactin, fractalkine, TCA-4, Exodus-2, Exodus-3, or CK β -11.

16. (Original) The method of claim 1, wherein the ligand for the second chemoattractant receptor is a chemokine.

17. (Previously presented) The method of claim 16, wherein the chemokine is selected from the group consisting of CCR, CXCR, and CX3CR receptor ligands.

18. (Original) The method of claim 17, wherein the chemokine is IL-8, GCP-2, Gro α , Gro β , Gro γ , ENA-78, PBP, MIG, IP-10, I-TAC, SDF-1 α , BLC, MIP-1 α , MIP-1 β , RANTES, HCC-1, HCC-2, HCC-3, HCC-4, MCP-1, MCP-2, MCP-3, MCP-4, eotaxin-1, eotaxin-2, TARC, MDC, MIP-3 α , MIP-3 β , 6CKine, I-309, TECK, lymphotactin, fractalkine, TCA-4, Exodus-2, Exodus-3, or CK β -11.

19. (Previously presented) The method of claim 1, wherein the ligands for the first and the second chemokine receptors are placed in the lower chamber simultaneously.

20. (Previously presented) The method of claim 1, wherein the ligands for the first and the second chemokine receptors are placed in the lower chamber in series.

21. (Previously presented) The method of claim 1, wherein the candidate antagonist is placed before at least one of the ligands.

22. (Previously presented) The method of claim 1, wherein monitoring movement comprises measuring a signal.

23. (Original) The method of claim 22, wherein the signal is a fluorescent signal.

24. (Previously presented) The method of claim 1, wherein monitoring movement comprises counting cells using a microscope.

25. (Previously presented) The method of claim 1, wherein monitoring movement comprises labeling cells with a marker.

26. (Original) The method of claim 25, wherein the marker is a dye or a radioactive label.

27. (Currently amended) The method of claim 1, wherein determining is performed by a method comprising steps of:

~~incubating~~ placing a first cell population comprising the first chemoattractant receptor with a candidate antagonist in the upper chamber;
~~incubating a second cell population comprising the second chemoattractant receptor with the candidate antagonist in the upper chamber;~~

placing an inhibitory concentration of a ligand for the first chemoattractant receptor in the lower chamber;

~~placing an inhibitory concentration of a ligand for the second chemoattractant receptor in the lower chamber; and~~

assaying movement of the first ~~and the second~~ cell population from the upper chamber to the lower chamber, wherein the movement identifies the candidate antagonist as an antagonist of ~~either the first or the second~~ chemoattractant receptor, and

placing a second cell population comprising the second chemoattractant receptor with the candidate antagonist in the upper chamber;

placing an inhibitory concentration of a ligand for the second chemoattractant receptor in the lower chamber; and

assaying movement of the second cell population from the upper chamber to the lower chamber, wherein the movement identifies the candidate antagonist as an antagonist of the second chemoattractant receptor.

28. (Previously presented) A method for identifying a chemoattractant receptor antagonist, comprising:

providing an apparatus comprising an upper chamber and a lower chamber separated by a porous membrane;

placing a candidate antagonist and a first cell population and a second cell population in the upper chamber, wherein the first cell population comprises a first chemoattractant receptor and wherein the second cell population comprises a second chemoattractant receptor;

placing an inhibitory concentration of a ligand for the first chemoattractant receptor in the lower chamber;

placing an inhibitory concentration of a ligand for the second chemoattractant receptor in the lower chamber;

monitoring movement of the first and the second cell populations from the upper chamber to the lower chamber, wherein the movement identifies the

candidate antagonist as an antagonist of at least one of the first and second chemoattractant receptors; and

determining whether an identified antagonist is an antagonist for one of the first chemoattractant receptors, the second chemoattractant receptor, or both.

29. (Previously presented) The method of claim 28, wherein at least two candidate antagonists are placed with the first and the second cell populations in the upper chamber.

30. (Original) The method of claim 28, wherein the candidate antagonist is a peptide, peptide-like molecule, non-peptidyl organic compound, inorganic compound, nucleic acid or antibody.

31. (Original) The method of claim 28, wherein the inhibitory concentration of the ligand for the first chemoattractant receptor inhibits cell migration greater than or equal to about 50% of maximal ligand-activated cell migration.

32. (Original) The method of claim 28, wherein the inhibitory concentration of the ligand for the first chemoattractant receptor inhibits cell migration greater than or equal to about 95% of maximal ligand-activated cell migration.

33. (Original) The method of claim 28, wherein the inhibitory concentration of the ligand for the first chemoattractant receptor inhibits cell migration greater than or equal to about 100% of maximal ligand-activated cell migration.

34. (Original) The method of claim 28, wherein the inhibitory concentration of the ligand for the second chemoattractant receptor inhibits cell migration greater than or equal to about 50% of maximal ligand-activated cell migration.

35. (Original) The method of claim 28, wherein the inhibitory concentration of the ligand for the second chemoattractant receptor inhibits cell migration greater than or equal to about 95% of maximal ligand-activated cell migration.

36. (Original) The method of claim 28, wherein the inhibitory concentration of the ligand for the second chemoattractant receptor inhibits cell migration greater than or equal to about 100% of maximal ligand-activated cell migration.

37. (Original) The method of claim 28, wherein the first and second chemoattractant receptors are each independently a chemokine receptor.

38. (Original) The method of claim 37, wherein the chemokine receptor is selected from the group consisting of CCR, CXCR, CX3CR, and XCR classes of chemokine receptors.

39. (Original) The method of claim 38, wherein the chemokine receptors are CXCR1, CXCR2, CXCR3, CXCR4, CXCR5, CCR1, CCR2, CCR3, CCR4, CCR5, CCR6, CCR7, CCR8, CCR9, CCR10, CCR11, CX3CR1 or XCR1.

40. (Original) The method of claim 28, wherein the ligand for the first chemoattractant receptor is a chemokine.

41. (Previously presented) The method of claim 40, wherein the chemokine is selected from the group consisting of CCR, CXCR, and CX3CR receptor ligands.

42. (Original) The method of claim 41, wherein the chemokine is IL-8, GCP-2, Gro α , Gro β , Gro γ , ENA-78, PBP, MIG, IP-10, I-TAC, SDF-1 α , BLC, MIP-1 α , MIP-1 β , RANTES, HCC-1, HCC-2, HCC-3, HCC-4, MCP-1, MCP-2, MCP-3, MCP-4, eotaxin-1, eotaxin-2, TARC, MDC, MIP-3 α , MIP-3 β , 6Ckine, I-309, TECK, lymphotactin, fractalkine, TCA-4, Exodus-2, Exodus-3, or CK β -11.

43. (Original) The method of claim 28, wherein the ligand for the second chemoattractant receptor is a chemokine.

44. (Previously presented) The method of claim 43, wherein the chemokine is selected from the group consisting of CCR, CXCR, and CX3CR receptor ligands.

45. (Original) The method of claim 44, wherein the chemokine is IL-8, GCP-2, Gro α , Gro β , Gro γ , ENA-78, PBP, MIG, IP-10, I-TAC, SDF-1 α , BLC, MIP-1 α , MIP-1 β , RANTES, HCC-1, HCC-2, HCC-3, HCC-4, MCP-1, MCP-2, MCP-3, MCP-4, eotaxin-1, eotaxin-2, TARC, MDC, MIP-3 α , MIP-3 β , 6CKine, I-309, TECK, lymphotactin, fractalkine, TCA-4, Exodus-2, Exodus-3, or CK β -11.

46. (Previously presented) The method of claim 28, wherein the ligands for the first and the second chemoattractant receptor are placed in the lower chamber simultaneously.

47. (Previously presented) The method of claim 28, wherein the ligands for the first and the second chemoattractant receptor are placed in the lower chamber in series.

48. (Previously presented) The method of claim 28, wherein the at least one candidate antagonist is placed in the apparatus before the at least one of the ligands.

49. (Previously presented) The method of claim 28, wherein the monitoring movement comprises measuring a signal.

50. (Original) The method of claim 49, wherein the signal is a fluorescent signal.

51. (Previously presented) The method of claim 28, wherein monitoring movement comprises counting cells using a microscope.

52. (Previously presented) The method of claim 28, wherein monitoring movement comprises labeling cells with a marker.

53. (Original) The method of claim 52, wherein the marker is a dye or a radioactive label.

54. (Currently amended) The method of claim 28, wherein determining is performed by a method comprising steps of:

placing a first cell population comprising first chemoattractant receptor and a candidate antagonist in the upper chamber;

~~placing a second cell population comprising second chemoattractant receptor and the candidate antagonist in the upper chamber;~~

placing an inhibitory concentration of a ligand for the first chemoattractant receptor in the lower chamber;

~~placing an inhibitory concentration of a ligand for the second chemoattractant receptor in the lower chamber; and~~

monitoring movement of the first ~~and the second~~ cell population from the upper chamber to the lower chamber, wherein the movement identifies the candidate antagonist as an antagonist of either the first ~~or the second~~ chemoattractant receptor., and

placing a second cell population comprising second chemoattractant receptor and the candidate antagonist in the upper chamber;

placing an inhibitory concentration of a ligand for the second chemoattractant receptor in the lower chamber;

monitoring movement of the second cell population from the upper chamber to the lower chamber, wherein the movement identifies the candidate antagonist as an antagonist of the second chemoattractant receptor.

55. (Cancelled)

56. (Cancelled)

57. (Cancelled)

58. (Cancelled)

59. (Cancelled)

60. (Cancelled)

61. (Previously presented) The method of claim 1, wherein the chemoattractant receptor is selected from the group consisting of C5aR, FPRL1 receptor, CXCR4, CXCR3, CCR1, and CCR9.

62. (Previously presented) The method of claim 28, wherein the chemoattractant receptor is selected from the group consisting of C5aR, FPRL1 receptor, CXCR4, CXCR3, CCR1, and CCR9.

63. (New) The method of claim 1, wherein determining is performed by FLIPR™ assay, calcium mobilization assay, or cell migration assay.

64. (New) The method of claim 28, wherein determining is performed by FLIPR™ assay, calcium mobilization assay, or cell migration assay.

CLAIM STATUS

Claims 55-60 were cancelled. Claims 27 and 54 are amended. Amendments to claims 27 and 54 relate to form and/or grammar only for the purpose of increasing the clarity of each. New claims 63 and 64 are added. Support for new claims 63 and 64 may be found throughout the specification, including for example at page 12, lines 12-14, page 17, lines 4-11, and page 25, lines 1-14.

No new matter has been added.

Claims 1-54 and 61-64 are pending.